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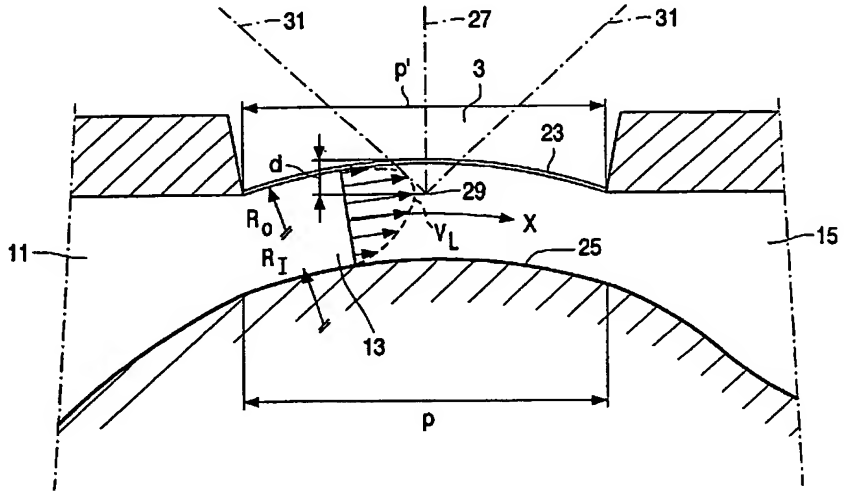
(54) Title: A DEVICE FOR GENERATING X-RAYS HAVING A LIQUID METAL ANODE



(57) Abstract: The invention relates to a device for generating X-rays (31). The device has a source (5) for emitting electrons (27) accommodated in a vacuum space (3). The X-rays are emitted by a liquid metal as a result of the incidence ofthe electrons. The liquid metal flows through a constriction (13) where the electrons emitted by the source impinge upon the liquid metal. The constriction is bounded by a thin window (23), which is made from a material which is transparent to electrons and X-rays and which separates the liquid metal in the constriction from the vacuum space, and by a wall (25) opposite to the window. According to the invention, the wall (25) has a profile (p) which matches a profile (p') which the window (23) has,during operation, as a result of a deformation of the window caused by a pressure of the liquid metal in the constriction (13). Thus, it is achieved that the constriction has a predetermined intended cross-sectional area, and a decrease of the flow velocity and an accompanying excessive increase of the pressure at the location of the deformation of the window are prevented.

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